

Response #1:

Sections of the Draft EIS where this is addressed:

2.4.2.3, 4.2.4, 6.5.2.2, 7.6.1.3

How is this topic addressed in the Draft EIS:

FHWA and TxDOT have identified that this project does not have indirect air quality impacts associated with Port expansion and associated increases in shipping traffic that would accompany it. Potential effects of port-related development, including increased shipping, are instead evaluated as cumulative effects and discussed in Section 7.6.1.3 of the Final EIS.

Response to Comment:

The decision to raise the elevation of the bridge as part of this proposed action was a result of several considerations, as discussed in Section 2.4.2.3 and in the Final EIS. First, the existing Harbor Bridge provides 138 feet of vertical clearance at mean high water, which means the maximum air-draft for vessels calling at the Port's Inner Harbor is 138 feet. The existing Harbor Bridge was designed and built in the 1950s and, as a result, it accommodates vessel sizes of the post-World War II era. As the maritime industry has evolved with the expansion of global trade, the growth in size of modern ships and cargo has outgrown the Harbor Bridge's 138-foot vertical restriction. The 138-foot navigational restriction is impacting operations at the port according to a 2010 Cambridge Systematics, Inc. report, but also the ability of the state to meet the increasing freight traffic demands expected as a result of the expansion of the Panama Canal. The 138-foot restriction also affects vessels with a light air draft greater than 138 feet, requiring them to take on ballast water after unloading to reduce air draft and clear the bridge when exiting the Inner Harbor. Secondly, considering the minimum 201- to 205-foot vertical restriction at the Panama Canal and the importance the expansion of the canal is projected to play in the overall State plan for accommodating the increase in freight traffic along the Gulf Coast, the vertical restriction of the bridges proposed for the project is 205 feet. Lastly, with respect to regional connectivity, the MPO considers US 181 a priority corridor in the future expansion of Interstate Highway 69 (I-69) to connect directly to the Port of Corpus Christi, the seventh largest port in the United States in total tonnage and the primary economic engine for the Coastal Bend. As Joint Lead Agencies, TxDOT and FHWA need to consider multiple modes of transportation in the development of this regionally important project, including waterborne freight, and these modes have been considered in the context of a 75- to 100-year project design life as part of the objective to provide the transportation infrastructure to support economic opportunities in the area. This objective is noted in Section 1.5.1 of the Final EIS.

40 CFR § 1508.8 (b) states that indirect effects are caused by the action; Section 6.5.2.2 of the Draft EIS explains that the introduction of Post Panamax vessels into the Inner Harbor would not be caused by the proposed project but would rather be the result of increased global demand for commodities, for which the Port of Corpus Christi would need to be in the competitive position to meet. As Section 6.5.2.2 illustrates, the Port of Corpus Christi Authority considers the proposed project to be a "minor factor only" in their decision-making process to expand docking facilities or lease land for development. Global market demand, intermodal freight infrastructure improvements, and oil and gas exploration in the region are more important factors. Raising the height of the Harbor Bridge will not cause an increase in the global demand for goods shipped into or out of the Inner Harbor; a greater air draft clearance and a

rise in global demand will not cause Post Panamax vessels to choose Corpus Christi over Houston, for example, without landside infrastructure improvements such as rail and highway expansion that the Port of Corpus Christi Authority is not in a position to implement.

It appears that an inference was made that larger Panamax and cruise ships would be able to enter the port if the bridge height were raised; however, it was explained in Sections 4.2.4 and 6.5.2.2 of the Draft EIS that the depth of the ship channel, dock size, loading and intermodal infrastructure, and maneuvering of the sharp turn inside the jetties at Port Aransas are also limiting factors for larger ships wanting to enter the channel. Therefore, these larger ships may not be able to access the port even with this increase in bridge height, so the assertion that the bridge height clearance is the sole limiting factor for larger ships entering the port appears to be erroneous.

The purpose of the Harbor Bridge project is not to serve Post Panamax vessels, but rather to improve safety and reduce long-term maintenance costs. In fact, the Port of Corpus Christi has stated that with a higher bridge, economic efficiency would be increased for some Port customers, allowing them to ship cargoes in and out of the Port on fewer vessels with greater capacities, thereby lowering unit transport costs (see Draft EIS Section 6.5.2.2).

Section 2.4.2.3 of the Draft EIS makes no mention of cruise ships. The introduction of cruise ships into the port is not considered to be caused by the project or considered to be reasonably foreseeable. Although the desire of the visitors bureau to attract cruise ships is acknowledged, the reasons that cruise ships in the Inner Harbor are not reasonably foreseeable is outlined in Section 6.5.2.2. The document also states in Section 6.5.2.2 that “(c)apitalization on the economic promises of the cruise ship industry relies heavily on the perception of a port city as either a tourism destination or as a location with convenient access to popular destinations.” In the event that the infrastructure at the Port of Corpus Christi were suitable for cruise ships, the Port would still be required to compete in a market with long-established homeports including Miami, Ft. Lauderdale, and Cape Canaveral. Based on this uncertainty (as well as other factors discussed in Section 6.5.2.2), cruise ships calling on the Port is not reasonably foreseeable.

Response #2:

Cumulative Air Quality Impacts addressed through Implementation of the CAA

The Draft EIS discloses potential impacts to the referenced communities in Sections 3.5.1.4, 4.7.3.4, and 7.6.4.2. An analysis and discussion of potential cumulative impacts due to increased Port-related development, including roadway improvements, railroad improvements, the potential for increased shipping, and development of industrial facilities, is provided in Section 7.6.1.3. The project is not expected to result in significant adverse direct, indirect, or cumulative air quality impacts.

Because the CAA is anticipated to prevent or offset any significant adverse indirect and cumulative air quality impacts from point, area, on-road, and non-road sources, additional air quality analyses would not be warranted and would not be expected to provide any additional useful information for decision makers or the public. In addition, Appendix C of the response to comments, "Trends in Air Quality within the Project Area", contains more regulatory updates, monitoring, modeling, and EPA and TCEQ future emission estimates for the area that supports the conclusion that implementation of the CAA is working

to reduce emissions in the area. In response to this comment, this supplemental information on trends in air quality will be added to the cumulative effects sections of the FEIS.

Hot-Spot Analysis

The term “hot-spot” was used in this comment. A hot-spot analysis has a specific meaning under the CAA and is required for certain projects under the 40 CFR 93. The project is located in an EPA-designated attainment or unclassifiable area; therefore, a hot-spot analysis under the context of the CAA is not required. A project in an attainment area would not be expected to meet more stringent requirements than what EPA requires in a nonattainment area. In addition, there is no requirement under NEPA guidelines to perform a similar hot-spot type of analysis.

Response #3:

The “Incomplete or Unavailable Information for Project-Specific MSAT Health Impacts Analysis” section of the Draft EIS, is part of the qualitative MSAT analysis provided in Sections 3.6.4 and 4.9.2.2 of the Draft EIS. The language is specific to that qualitative MSAT analysis and does not apply to the other pollutants referenced (NO_x, SO₂, PM, and ozone) in this comment.

Compliance with Existing MSAT Requirements

TxDOT's approach to analyzing MSAT impacts is consistent with FHWA's Interim Guidance Update on Mobile Source Air Toxic Analysis in NEPA Documents, which was developed to be compliant with CEQ regulations on providing qualitative analyses in NEPA documents. Therefore, the project has met the NEPA compliance requirements for analyzing the project's impacts associated with MSAT. There is no separate CAA requirement to perform an MSAT analysis for transportation projects. As further explained in Section 4.9.2.2, a quantitative MSAT analysis will be provided in the Final EIS. It should be noted, however, that FHWA guidance specifies a regional approach for analyzing MSAT impacts quantitatively that provides for a relative comparison of emissions over time between the build and no-build alternatives.

As explained in the DEIS, the No-Build Alternative would result in gradually increasing VMT as traffic volumes increase and traffic congestion worsens within the existing roadway system over time. However, MSAT emissions will likely be lower than present levels in future years as a result of EPA's national control programs that are projected to reduce annual MSAT emissions by over 80 percent from 2010 to 2050. For this reason, mobile sources of air toxics in relation to the Harbor Bridge project are expected to reduce their contribution to overall air toxic emissions in the future, regardless of alternative chosen and regardless of the air toxic emissions from other sources in the area.

Compliance with the CAA and NEPA for NO_x, ozone, SO₂, and PM

There is no requirement under the CAA or NEPA guidelines to perform monitoring for NO_x, PM, ozone, or SO₂ for a transportation project. In fact, under the CAA conformity rule (40 CFR 93.102(b)), SO₂ is not even identified as a transportation-related pollutant except as a precursor pollutant in PM_{2.5} nonattainment areas. In addition, there is no requirement under the CAA or NEPA guidelines to perform a project-level NO_x, PM, ozone, or SO₂ analysis for a transportation project in an attainment area. A project in an attainment area would not be expected to meet more stringent requirements than what EPA requires in a nonattainment area. Because this project has met all CAA and NEPA analysis

requirements, it is not anticipated to have any significant adverse direct impacts. In addition, implementation of the CAA is anticipated to prevent or offset any significant adverse indirect and cumulative air quality impacts from point and area sources. Because this project is not expected to have or contribute to a significant adverse impact to air quality, further analysis does not appear to be warranted. There are no CAA requirements to perform a localized air quality analysis for individual transportation projects in attainment areas.

In addition, Sections 3.6.2 and 7.3.1 of the Draft EIS discuss the overall trends of improving air quality in the region for the criteria pollutants and MSAT. Appendix C of the response to comments, "Trends in Air Quality within the Project Area," contains even more regulatory updates, monitoring, and modeling that supports the conclusion that implementation of the CAA is working to reduce emissions in the area. Specifically, Appendix C contains references to the TCEQ Trends Report, which shows that concentrations of all of these pollutants (NOx, PM, ozone, and SO2) are expected to decline significantly in the future for Nueces County.

Health Impacts Assessment (HIA)

There is no CAA or NEPA rule or guidance that mandates the use of an HIA. While EPA and FHWA both agree on the usefulness of addressing MSATS in NEPA documents for highway projects, the agencies disagree about the value of health risk assessment as a method for doing so.

The use of such an analysis could be predicated on the assumption that there may be potential significant adverse effects that need evaluation. However, as mentioned previously, significant adverse effects for air quality are not anticipated with this project. In addition, FHWA has identified that uncertainty associated with such an analysis is anticipated to be greater than the accuracy of the result. In FHWA's Interim Guidance Update on Mobile Source Air Toxic Analysis in NEPA Documents, FHWA states, "(t)he outcome of such an assessment, adverse or not, would be influenced more by the uncertainty introduced into the process through assumption and speculation rather than any genuine insight into the actual health impacts...". There is inherent uncertainty in the assumptions and conjecture that must be made when undertaking such an analysis, such as predicting the future which has known uncertainties like: predicted land use, population growth, economics, employment, and personal aesthetics. When you combine that with the uncertainty from traffic modeling, emissions modeling, dispersion modeling, and predicting health outcomes, the overall uncertainty of the result can make it far from accurate. Additional uncertainty exists in regards to a 70-year lifetime exposure. FHWA identifies that it is particularly difficult "to determine the portion of time that people are actually exposed at a specific location; and to establish the extent (of MSAT concentrations) attributable to a proposed action." Therefore, it would not be beneficial to decision makers and misleading to the public to provide them with a result with little to no accuracy and great uncertainty. See Appendix A for more detailed information on the applicability and usefulness of these types of analyses for transportation project. See Appendix B of the response to comments for EPA case studies that indicate modeling associated with air quality health impact or health risk assessments have a high degree of uncertainty and inaccuracy.

Response #4:

Quantitative MSAT Analysis

As identified in Section 4.9.2.2, a quantitative MSAT analysis will be provided in the Final EIS. The analysis includes a regional approach for analyzing MSAT impacts quantitatively that provides for a relative comparison of emissions overtime between the preferred and no-build alternative. The analysis includes identifying VMT changes for specific roadways links between the build and no-build scenario in order to identify an affected network. All roadway links in the identified affected network are included in the MSAT emissions analysis in order to identify the project's relative contribution of emissions to the entire affected network.

Please refer to Section 4.9.2.2 of the Draft EIS and the response to the previous comment HB-AC5d (in regards to HIAs) for more information regarding why localized analyses for MSAT are not performed.

Compliance with Existing MSAT Requirements

The qualitative MSAT analysis presented in this Draft EIS is consistent with FHWA's Interim Guidance Update on Mobile Source Air Toxic Analysis in NEPA Documents. Please see the previous response to comment HB-AC5d for more detail on project compliance with MSAT requirements under NEPA.

Hot-Spot Analysis

Being in an attainment or unclassifiable area, this project does not appear to meet the requirements for a hot-spot analysis. Please see the previous response to comment HB-AC5c for more detail on applicability of this analysis to this project.

Compliance with Criteria Pollutants Requirements

In regards to NEPA requirements for air quality, FHWA requires a CO screening analysis be prepared for projects that add capacity and have a design year AADT > 140,000 vehicles per day. Although this project does not meet these criteria, FHWA and TxDOT have chosen to perform a localized CO Traffic Air Quality Analysis (CO TAQA) due to public concern over air quality. The results of this analysis are summarized in Section 4.9.2.1 and they indicate that even under a worst-case scenario, emissions from the roadway would not be expected to exceed the CO NAAQS in any of the years analyzed.

Existing Studies, Monitoring and Modeled Data

Sections 3.6.2 and 7.3.1 of the DEIS discuss the overall trends of improving air quality in the region for the criteria pollutants and MSAT. Since this project is not expected to have any significant air quality impacts and with emissions from the transportation sector are on the decline (even with anticipated VMT increases), additional air quality analyses would not appear to be warranted. See Appendix C of the response to comments for more regulatory updates, monitoring, modeling and EPA and TCEQ future emission estimates that support the conclusion that additional assessment is not warranted.

Response #5:

Applicable Air Quality Analyses

There is no requirement under the CAA or NEPA guidelines to perform a project-level NO_x, ozone, PM, or SO₂ analysis for a transportation project in an attainment area. Please see the discussion in the response to comment HB-AC5d for more details. Under FHWA's NEPA guidelines, however, analyses for CO (CO TAQA) and MSAT (qualitative MSAT) were performed and documented in the Draft EIS in Sections 4.9.2.1, 3.6.4 and 4.9.2.2, respectively.

In addition, Sections 3.6.2 and 7.3.1 of the Draft EIS discuss the overall trends of improving air quality in the region for the criteria pollutants and MSAT. Since this project is not expected to have any significant air quality impacts and with emissions from the transportation sector on the decline (even with anticipated VMT increases), additional air quality analyses would not appear to be warranted. See Appendix C of the response to comments for more regulatory updates, monitoring, modeling, and EPA and TCEQ future emission estimates for the area that support the conclusion that additional assessment is not warranted. Specifically, Appendix C contains references to the TCEQ Trends Report, which shows that concentrations of the referenced pollutants (NOx, PM, ozone, and SO2) are expected to decline significantly in the future for Nueces County.

Relationship Between NEPA and the CAA

The term “all vehicle pollutants” is a loaded term. It should be noted that under NEPA, this is not defined. It is the CAA that gives context to this term. NEPA acts as an umbrella law under which compliance with multiple laws for multiple media can be documented. These media may include cultural resources; environmental resources such as soil, air, and water; and even ambient noise. It is these other laws, and not necessarily NEPA, that often provide a basis for identifying not only what may constitute a concern but at what threshold it may become a concern. For instance, it is the CAA that identifies the criteria pollutants and the thresholds, or NAAQS, by which they may be considered significant in the environment. Even for the CO TAQA, which is a NEPA requirement, it is the CO NAAQS established under the CAA against which the modeled emissions are compared. In fact, CO is analyzed because the CAA identifies it as criteria pollutant. Therefore, NEPA may require specific methods for disclosing these impacts but because these other laws essentially establish what is significant for the various media, it is not possible to define how to address significance without referencing these other laws. For any requirements specifically required by NEPA and not another law, it is incumbent on the federal lead agency to provide appropriate rules or guidance to establish boundaries for what should be considered significant and at what threshold. An analogy with another law may more fully explain that the underlying laws establish analysis requirements and NEPA significance levels, not NEPA. Under the Endangered Species Act, critical habitat is evaluated for endangered or threatened species under NEPA. NEPA does not add new obligations under the Endangered Species Act such as evaluating critical habitat for non-threatened or non-endangered species. Without NEPA or these other laws establishing these boundaries of what is significant for a specific media, NEPA disclosure requirements could be considered unbounded and without limit in their depth and scope, as is being inferred in this comment. Such an approach would leave State Departments of Transportation (DOTs) and other project sponsors without a clearly defined path to compliance and without any assurance that any level of project planning, development, and analysis would be sufficient to meet the requirements of NEPA.